EPI Update for Friday, May 18, 2018
Center for Acute Disease Epidemiology (CADE)
Iowa Department of Public Health (IDPH)

Items for this week's EPI Update include:

- ***Campylobacter* sickens over 1,000 Iowans each year**
- **Those exposed to *Brucella* livestock vaccine may need prophylaxis**
- **Gov. Reynolds signs bipartisan opioid bill into law**
- **In the news: New rapid rabies test could revolutionize testing and treatment**
- **In the news: In ancient skeletons, scientists discover a modern foe**
- **Infographic: Recommendations for managing human rabies exposure**
- **Meeting announcements and training opportunities**

Campylobacter sickens over 1,000 Iowans each year

Over 1,000 cases of *Campylobacter* infection are reported in Iowa each year, and nationwide an estimated 1.3 million cases occur annually. Most people recover within a week, but they may shed bacteria in their stool for several weeks, potentially spreading these bacteria to others.

While *Campylobacter* infection only rarely results in long-term health consequences, up to 20 percent of infected people may develop irritable bowel syndrome and up to 5 percent develop arthritis. About one in every 1,000 reported *Campylobacter* illnesses leads to Guillain-Barré syndrome (GBS), causing muscle weakness and paralysis lasting weeks to years. As many as 40 percent of GBS cases in the U.S. may be triggered by *Campylobacter* infection.

Most *Campylobacter* illnesses result from eating raw or undercooked poultry or food cross-contaminated with the bacteria from raw poultry. Animals can carry *Campylobacter* in their intestines and other organs, and meat can become contaminated when the animal is slaughtered. While studies have found *Campylobacter* on 33 percent of raw chicken, proper cooking and stopping cross contamination will prevent illness. Sometimes, infections can happen after contact with animals, their feces, or their environment. Milk can also become contaminated when a cow has a *Campylobacter* infection in her udder or when milk is contaminated with manure, causing illness after drinking unpasteurized milk.

Over 440 cases of *Campylobacter* have been reported this year in Iowa. Infected persons reported the following exposures:

- 70 percent consumed poultry products
- 52 percent were exposed to companion animals (i.e. dog and cats)
- 21 percent had livestock exposure
- 1.3 percent consumed unpasteurized (raw) milk

For more information on *Campylobacter*, visit www.cdc.gov/campylobacter/faq.html.

Those exposed to *Brucella* livestock vaccine may need prophylaxis
Since 1996, RB51 has been the preferred strain used for *Brucella* vaccination in cattle (before 1996, vaccine used the S19 strain). Although the RB51 strain is less pathogenic than the S19 strain, it still is pathogenic to humans. Since cows can rarely shed RB51 in their milk, people who consume raw milk are at risk for infection.

Veterinarians working with cattle are at risk of accidental exposure to the RB51 strain during vaccine administration via needle stick (spray exposure to the conjunctiva and open wounds can also occur). When administering the vaccine, veterinarians are encouraged to use proper PPE (gloves and eye protection) and ensure proper animal restraint.

In humans, fever, sweating, muscle and joint pain, and fatigue are common clinical signs of *Brucella* infection. If untreated, long-term effects include arthritis and swelling of the heart, spleen, liver and testicles. Brucellosis can also cause miscarriages in pregnant women. In untreated persons, the estimated case fatality rate ranges from 2 to 5 percent. Deaths are usually due to endocarditis or meningitis.

Individuals potentially exposed to the vaccine strain RB51 should receive post-exposure prophylaxis (PEP) which includes doxycycline, in addition to trimethoprim-sulfamethoxazole or another suitable antimicrobial.

For additional public health guidance on Brucellosis, visit www.cdc.gov/brucellosis/pdf/brucellosi-reference-guide.pdf.

Gov. Reynolds signs bipartisan opioid bill into law
On May 14, Governor Reynolds signed House File 2377 into law. Often referred to as the “Opioid Bill”, this legislation ushers-in several changes which include:

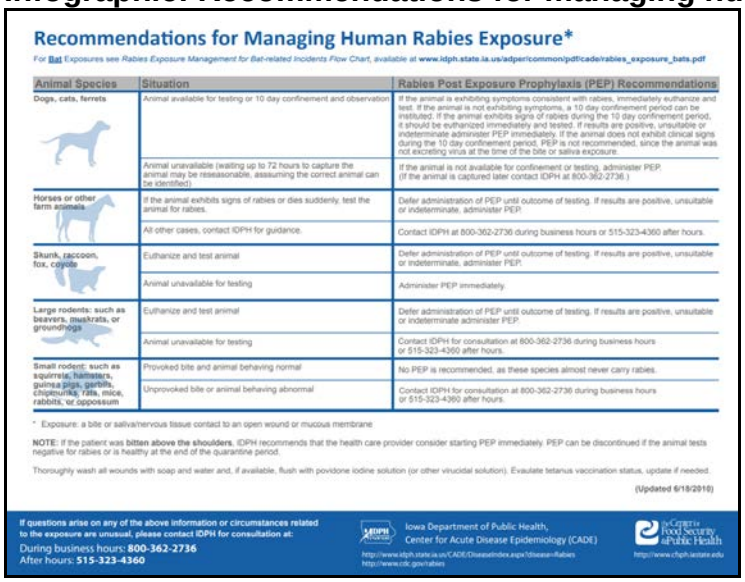
- Prescriber registration and use of the Prescription Monitoring Program (PMP) prior to issuing an opioid prescription
- Transmission of prescription information for controlled substances by a pharmacy to the PMP within one business day of the dispensing
- Adoption of a Good Samaritan law to provide certain protections for good-faith actions to seek medical assistance for an individual experiencing an overdose
- Provider education on the CDC Guidelines for Prescribing Opioids for Chronic Pain
- Adding naloxone administrations by first responders and dispensings by pharmacies as reportable to the PMP
- Mandating the electronic prescribing of all prescriptions (both controlled and non-controlled) beginning January 1, 2020

- Granting the Board of Pharmacy the authority to generate and send "proactive notifications" that summarize a practitioners history of prescribing controlled substances

In the news: New rapid rabies test could revolutionize testing and treatment
www.cdc.gov/media/releases/2018/p0516-rapid-rabies-test.html

In the news: In ancient skeletons, scientists discover a modern foe
www.nytimes.com/2018/05/09/science/ancient-dna-bones-hepatitis.html

Infographic: Recommendations for managing human rabies exposure



Recommendations for Managing Human Rabies Exposure*

For Bat Exposures see *Rabies Exposure Management for Bat-related Incidents Flow Chart*, available at www.idph.state.ia.us/adper/common/pdf/cade/rabies_exposure_bats.pdf

Animal Species	Situation	Rabies Post Exposure Prophylaxis (PEP) Recommendations
Dogs, cats, ferrets	Animal available for testing or 10 day confinement and observation	If the animal is exhibiting symptoms consistent with rabies, immediately euthanize and test. If the animal is not exhibiting symptoms, a 10 day confinement period can be instituted. If the animal exhibits signs of rabies during the 10 day confinement period, it should be euthanized immediately and tested. If results are positive, unsuitable or indeterminate administer PEP immediately. If the animal does not exhibit clinical signs during the 10 day confinement period, PEP is not recommended, since the animal was not excreting virus at the time of the bite or saliva exposure.
	Animal unavailable (waiting up to 72 hours to capture the animal may be reasonable, assuming the correct animal can be identified)	If the animal is not available for confinement or testing, administer PEP. (If the animal is captured later contact IDPH at 800-362-2736.)
Horses or other farm animals	If the animal exhibits signs of rabies or dies suddenly, test the animal for rabies.	Defer administration of PEP until outcome of testing. If results are positive, unsuitable or indeterminate, administer PEP.
	All other cases, contact IDPH for guidance.	Contact IDPH at 800-362-2736 during business hours or 515-323-4360 after hours.
Skunk, raccoon, fox, coyote	Euthanize and test animal	Defer administration of PEP until outcome of testing. If results are positive, unsuitable or indeterminate, administer PEP.
	Animal unavailable for testing	Administer PEP immediately.
Large rodents: such as beavers, muskrats, or groundhogs	Euthanize and test animal	Defer administration of PEP until outcome of testing. If results are positive, unsuitable or indeterminate administer PEP.
	Animal unavailable for testing	Contact IDPH for consultation at 800-362-2736 during business hours or 515-323-4360 after hours.
Small rodent: such as squirrels, hamsters, guinea pigs, gerbils, chipmunks, rats, mice, rabbits, or opposum	Provoked bite and animal behaving normal	No PEP is recommended, as these species almost never carry rabies.
	Unprovoked bite or animal behaving abnormal	Contact IDPH for consultation at 800-362-2736 during business hours or 515-323-4360 after hours.

* Exposure: a bite or saliva/nervous tissue contact to an open wound or mucous membrane

NOTE: If the patient was **bitten above the shoulders**, IDPH recommends that the health care provider consider starting PEP immediately. PEP can be discontinued if the animal tests negative for rabies or is healthy at the end of the quarantine period.

Thoroughly wash all wounds with soap and water and, if available, flush with povidone iodine solution (or other virucidal solution). Evaluate tetanus vaccination status, update if needed.

(Updated 6/18/2010)

If questions arise on any of the above information or circumstances related to the exposure are unusual, please contact IDPH for consultation at:
During business hours: **800-362-2736**
After hours: **515-323-4360**

Iowa Department of Public Health,
Center for Acute Disease Epidemiology (CADE)
http://www.idph.state.ia.us/CADE/DiseaseIndex.aspx?Disease=Rabies
http://www.cdc.gov/rabies

The Center for Food Security & Public Health
http://www.cfsph.iastate.edu

To view in full size, visit
idph.iowa.gov/Portals/1/Files/Rabies/Animal%20_Rabies_Chart_130618.pdf.

Meeting announcements and training opportunities
The Institute for Public Health Practice at the University of Iowa is holding a workshop, *Building Systems Thinking Capabilities in Public Health*, in Des Moines on June 5 and 6. State and local health practitioners are the intended audience, and there is no fee for the program. For more information and to register, visit www.public-health.uiowa.edu/iphp.

Have a healthy and happy week!
Center for Acute Disease Epidemiology
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800-362-2736